WHAT IS CLAIMED IS:

1. A glass funnel for a cathode ray tube, which comprises an open seal edge portion formed in a substantially rectangular shape, a cylindrical neck portion, a yoke portion for mounting a deflection yoke and a funnel body portion extending between the yoke portion and the seal edge portion, which forms a glass bulb for a cathode ray tube along with a glass panel, and which has a deflection angle of 120 deg or more;

the funnel body portion having a concave portion formed around the yoke portion, the concave portion having a depth of 10 mm or more, the depth of the concave portion being a distance in a direction of a bulb axis between a point on an outer surface of the funnel body portion closest to the neck portion in the direction of the bulb axis and a point on an outer surface of the concave portion farthest from the neck portion in the direction of the bulb axis in a first funnel section, which is a cross-section containing the bulb axis and a point P_{S1} lying closest to the bulb axis and on the outer periphery of the seal edge portion;

wherein a compressive stress layer is formed in a position where a tensile stress, which is generated on the outer surface of the funnel body portion when evacuating an inner space of the glass bulb for production of a cathode ray tube, takes a maximum value σ_{VTmax}, the compressive stress layer has a compressive

stress value σ_C of 80 to 350 MPa, the compressive stress layer has a thickness of 60 μm or more, and the maximum value σ_{VTmax} is 10 to 100 MPa.

2. The glass funnel according to Claim 1, wherein when a point on the outer surface of the funnel body portion, which is located at a position apart from the seal edge portion toward the neck portion by 30 mm in the direction of the bulb axis in the first funnel section, is defined as P_{B1}, a shortest distance from the point P_{B1} to the bulb axis is shorter than a shortest distance from the point P_{S1} to the bulb axis, and

a straight line connecting between the points P_{S1} and P_{B1} and a straight line extending parallel with the bulb axis form an acute angle θ_1 of 1 to 7 deg therebetween.

3. The glass funnel according to Claim 2, wherein when a point on the outer surface of the funnel body portion closest to the neck portion in a section containing the bulb axis and extending perpendicular to the first funnel section is defined as P_{T2};

when a point on the outer surface of the funnel body portion, which is located at a position apart from a point on an outer periphery of the seal edge portion and closer to the neck portion in the direction of the bulb axis, is defined as P_{B3}, the point on the outer periphery of the seal edge portion being locating in a section containing the point P_{T2} and extending parallel with the

first funnel section; and

when an acute angle, which is formed between a straight line connecting between the points P_{S3} and P_{B3} and a straight line extending parallel with the bulb axis, is defined as θ_3,

the angles θ_3 and θ_1 satisfy a relationship of $|\theta_1 - \theta_3| \leq 2$ deg.

4. The glass funnel according to Claim 1, wherein when points on the outer surface of the funnel body portion, whose tangents form an angle of 70 deg with respect to the bulb axis in the first funnel section, are defined as boundary points; when among the boundary points, a boundary point that is farthest from the bulb axis is defined as a first boundary point; when a boundary point, which is located between the first boundary point and the bulb axis and is closest to the first boundary point, is defined as a second boundary point; when a portion between the first boundary point and the second boundary point is defined as a roof portion; and when a straight line connecting between the first boundary point and the second boundary point is defined as an imaginary roof line;

the roof portion has an average curvature radius of 1000 mm or more, the imaginary roof line has a length of 20 to 100 mm, and the imaginary roof line and the bulb axis form an angle of 80 to 100 deg therebetween.

5. A cathode ray tube wherein a glass bulb comprises a

glass funnel defined in Claim 1.